GASOLINE BLENDING OPTIMIZATION

ENERGY SECTOR CASE STUDY

TRINDENT CONSULTING
make it happen™

Building on strong past engagements, one of the largest US crude refiners engaged Trindent to optimize their blending process to reduce the amount of quality giveaway in their gasoline blending operations.

66%
REDUCTION IN OCTANE GIVEAWAY

$20,300,000
ANNUALIZED SAVINGS

41%
REDUCTION IN VOLATILITY GIVEAWAY

HOW WE MADE IT HAPPEN

Planning & Scheduling

- Developed MBO P-Bonus update procedure to increase accuracy of blend prediction capability and reduce planned quality giveaway
- Installed safety stock inventory of gasoline blending components to aide with octane balance and provide buffer for unpredicted changes to rundown qualities
- Implemented weekly Blend Review Meetings to discuss specific blend performance and improve knowledge/best practices sharing
- Developed a target limit calculator to set ON and RVP targets using statistical analysis

Measurement Accuracy

- Initiated process to utilize V/L measurement equipment to measure V/L of gasoline blends instead of calculated ratio value
- Implemented procedure to create RAMAN Models for blended gasoline and maintain model accuracy
- Initiated utilization of RAMAN for mid blend testing of gasoline blends
- Designed and installed RAMAN Analyzer Bias Tracker to track RAMAN Analyzer vs. Knock Engine/Instrument deviation and bias
- Installed dashboard to monitor lab analyzer vs online analyzer bias to facilitate investigation of analyzer drift and other issues causing elevated giveaway

Blend Execution

- Implemented blend execution checklist to standardize gasoline blending process and maintain a log of adjustments made during the blend
- Designed and implemented mid blend adjustment process to predict finished tank properties during blend execution and enable adjustments during the blend to reduce giveaway and re-blend frequency
- Implemented giveaway performance reviews using information from operator giveaway performance dashboard, blend execution checklists, and mid blend adjustment tool
- Delivered enhanced operator training program with respect to giveaway to ensure continued awareness of giveaway, blend components, blending best practices and mid blend adjustments
- Implemented novel process that enables operators to switch reference fuels that feed online knock engines mid-blend, leading to greater online certification frequency and reduced giveaway

"Trindent provided the stewardship to quickly develop sustainable process, tools, and procedures around product giveaway. Trindent was instrumental in accelerating cross-functional communication and cooperation within the refinery. These elements ensure that the achieved results will sustain and continue to add future improvement and value"

-Refinery Product Control Manager

WE'RE HERE TO MAKE IT HAPPEN™.
CONTACT US TODAY AT info@trindent.com.

AFPM